

WHAT IS CLAIMED IS:

1. A hinged deck arrangement on a motor vehicle carrying railcar comprising:

at least one end deck segment pivotable along a transverse axis between a substantially horizontal raised position and a lowered position;

a stationary deck segment adjacent said end deck segment;

a pivot hinge member connecting said end deck segment to said stationary deck segment;

a support assembly for said end deck segment; and

at least one pivot assembly for shifting said end deck segment between said raised and lowered positions,

wherein said end segment is pivoted to the lowered position to reduce the height of the deck relative to a deck of an adjacent railcar.

2. A hinged deck arrangement in accordance with claim 1 further comprising a lock-out mechanism movable between a retracted position when said end deck segment is in the raised position and an extended position when said end deck segment is in the lowered position, wherein said lock-out mechanism prevents movement of an end door beyond said lock-out mechanism when said end deck segment is in the lowered position.

3. A hinged deck arrangement in accordance with claim 2 wherein said at least one pivot assembly comprises at least one pivotable support for slidably engaging said end deck segment.

4. A hinged deck arrangement in accordance with claim 1 wherein said at least one pivot assembly comprises:

a cam mechanism pivotally connected to said support assembly for slidably engaging said end deck segment; and

a lever for pivoting said cam mechanism between a first position for providing support for said end deck segment in said raised position and a second position for providing support for said end deck segment in said lowered position.

5. A hinged deck arrangement in accordance with claim 2 wherein said at least one pivot assembly has one or more pivot arms operable by a pair of cables.

6. A hinged deck arrangement in accordance with claim 1 wherein said at least one pivot assembly comprises:

a first pivot arm having upper and lower ends;

a pair of cables, one upper cable extending from the upper end of said first pivot arm and one lower cable extending from the lower end of said first pivot arm;

a second pivot arm pivotally connected to said first pivot arm at a pivot point intermediate the upper end and midpoint of said first pivot arm; and

a cam mechanism pivotally coupled to said second pivot arm opposite said first pivot arm, wherein said cam mechanism slidably engages said end deck segment.

7. A hinged deck arrangement in accordance with claim 6 wherein said support assembly comprises a stationary support gusset attached to the railcar and having an angled top edge, wherein said end segment engages the top edge when said end segment is in the lowered position

8. A hinged deck arrangement in accordance with claim 7 further comprising an upper spool for winding the upper cable and a lower spool for winding the lower cable.

9. A method of moving motor vehicles between a first deck of a first railcar and a second deck of a second railcar coupled to said first railcar, the first and second decks being at different elevations, comprising:

reducing the difference between the elevations of the ends of the first and second decks by pivoting an end section of the first deck so that the end section angles toward the second deck; and

transporting the motor vehicles from the first deck to the second deck over a bridge plate extending between said first and second decks after pivoting the end section, with said pivoted end section acting to reduce the slope of the bridge plate.

10. A method in accordance with claim 9 further comprising:
operating a pivoting assembly for pivoting said end section of the deck between a raised, generally horizontal position and lowered, angled position.

11. A method in accordance with claim 10 wherein said pivoting assembly is operated by winding a cable around a rotary mechanism to initiate rotation of a pivot arm assembly to further initiate movement of a cam mechanism for slidably supporting said end section.

12. A method in accordance with claim 10 wherein said pivoting assembly is operated by rotating a lever to initiate pivoting of a cam mechanism for slidably supporting said end section.